

What I claim is:

1. A pavement dryer for removing water from a paved surface, the pavement dryer comprising:

a gas processing system having,

a system frame mounted on transporting wheels to allow said system frame to traverse the paved surface,

a compressor mounted on said system frame and driven by an engine, said compressor having a compressor intake port and a compressor exhaust port, and

a collection chamber mounted on said system frame, said collection chamber having a chamber inlet and a chamber outlet, said chamber outlet communicating with said compressor intake port;

a pick-up assembly having,

an assembly frame,

means for adjustably connecting said assembly frame with respect to said system frame,

a nozzle supported by said assembly frame and having an elongated nozzle body having a nozzle opening bounded by a nozzle leading edge, a nozzle trailing edge, and a pair of end caps,

a trailing edge seal resiliently mounted with respect to said nozzle trailing edge so as to forcibly engage the paved surface when said nozzle body is in close

proximity to the paved surface,

a nozzle lip traversing said nozzle leading edge, said nozzle lip being configured to provide a controlled gap between the paved surface and said nozzle leading edge, and

a pair of assembly wheels providing support for said assembly frame and said nozzle with respect to the paved surface; and

a nozzle conduit connecting said chamber inlet and said nozzle providing communication therebetween.

2. The pavement dryer of claim 1 further comprising:

means for adjusting the size of said controlled gap.

3. The pavement dryer of claim 2 wherein said assembly wheels are adjustably mounted with respect to said assembly frame, further wherein said pick-up assembly further comprises:

end seals mounted to said end caps and extending towards the paved surface.

4. The pavement dryer of claim 1 wherein said means for adjustably connecting said assembly frame with respect to said system frame further comprises:

a pivotable connection.

5. The pavement dryer of claim 4 wherein said pivotable connection limits motion of said assembly frame so as to substantially track said system frame.

6. The pavement dryer of claim 5 wherein said means for adjustably connecting said assembly frame with respect to said system frame further comprises:

a pair of parallel tow bars that pivotably attach to said assembly frame at about the level of said assembly wheels and pivotably connect to said system frame; and

a stabilizing bar that is substantially parallel to said pair of tow bars and pivotably connects to said system frame.

7. The pavement dryer of claim 2 wherein said nozzle lip is a nozzle damper and said means for adjusting the size of said controlled gap is provided at least in part by adjusting the position of said nozzle damper with respect to said nozzle body.

8. The pavement dryer of claim 7 wherein said nozzle damper has a damper leading edge and a damper trailing edge, said damper trailing edge being pivotably mounted to said nozzle leading edge, said nozzle damper being configured to provide a convex surface for facing the paved surface.

9. The pavement dryer of claim 8 further comprising;

a nozzle damper control system for adjusting the separation of said convex surface from the paved surface to adjust the size of said controlled gap.

10. The pavement dryer of claim 1 wherein said collection chamber is a bifurcated chamber comprising:

a partition dividing said chamber into an upper section and a lower section, said partition having one or more passages therethrough.

11. The pavement dryer of claim 10 wherein said collection chamber further comprises:

at least one gas centrifuge for separating particulate and liquid components from air passing therethrough, said at least one gas centrifuge attaching to said partition, each of said at least one gas centrifuges having an air inlet port, a central passage having a free end, and a particulate drain opening, said at least one gas centrifuge being so mounted that said free end of said central passage opens into said upper section of said collection chamber, thereby providing a passage through said partition; and

a transport duct connecting said chamber inlet with said air inlet port of each of said at least one gas centrifuges.

12. The pavement dryer of claim 11 further comprising:

means for removing collected liquid and particulate matter from said lower section of said collection chamber.

13. The pavement dryer of claim 2 wherein said pair of assembly wheels resides between said nozzle and said system frame.

14. The pavement dryer of claim 13 further comprising:

a second pair of assembly wheels positioned such that said nozzle resides between said pair of assembly wheels and said second pair of assembly wheels.

15. The pavement dryer of claim 14 wherein said assembly wheels are each rotatably mounted to said assembly frame so as to rotate about an axis normal to the paved surface.

16. A pick-up assembly for use in combination with a gas processing system having a system frame mounted on transporting wheels for traversing a paved surface and a collection chamber having a chamber inlet through which air is drawn into the collection chamber, the pick-up assembly comprising:

an assembly frame;

a pair of assembly wheels mounted with respect to said assembly frame to support said assembly frame with respect to the paved surface;

means for adjustably connecting said assembly frame with respect to the system frame;

a nozzle supported on said assembly frame for communicating with the chamber inlet, said nozzle having an elongated nozzle body having a nozzle opening bounded by a nozzle leading edge, a nozzle trailing edge, and a pair of end caps;

a trailing edge seal resiliently mounted with respect to said nozzle trailing edge so as to forcibly engage the paved surface when said nozzle body is in close proximity to the paved surface; and

a nozzle lip traversing said nozzle leading edge, said nozzle lip being configured to provide a controlled gap between the paved surface and said nozzle leading edge.

17. The pick-up assembly of claim 16 further comprising:

means for adjusting the size of said controlled gap.

18. The pick-up assembly of claim 17 further comprising:

a second pair of assembly wheels positioned such that said nozzle resides between said pair of assembly wheels and said second pair of assembly wheels.

19. The pick-up assembly of claim 18 wherein said assembly wheels are each rotatably mounted to said assembly frame so as to rotate about an axis normal to the paved surface.

20. The pavement dryer of claim 17 wherein said nozzle lip is a nozzle damper having a damper leading edge and a damper trailing edge that is pivotably mounted to said nozzle leading edge, said nozzle damper being configured to provide a convex surface for facing the paved surface,

further wherein said means for adjusting the size of said controlled gap is provided at least in part by adjusting the position of said nozzle damper with respect to said nozzle body.